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Process for the enzymatic resolution of N-(alkoxycarbonyl)-4-ketoproline alkyl esters or N-(alkoxycarbonyl)-4-hydroxyproline alkyl esters using Candida antarctica lipase B

Description of Technology: This invention is in the field of biocatalysis. The present invention relates to a process for the enzymatic resolution of N-(alkoxycarbonyl)-4-ketoproline alkyl esters or N-(alkoxycarbonyl)-4-hydroxyproline alkyl esters. More specifically, this invention pertains to a process for the preparation of cis-4-hydroxy-D-proline and trans-4-hydroxy-L-proline using an enzyme catalyst for enzymatic resolution.

Patent Listing:

1. **US Patent No.** 5,928,933, Issued on July 27, 1999, "Process for the enzymatic resolution of N-(alkoxycarbonyl)-4-ketoproline alkyl esters or N-(alkoxycarbonyl)-4-hydroxyproline alkyl esters using Candida antarctica lipase B."

http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&co1=AND&d=PTXT&s1=5,928,933.PN.&OS=PN/5,928,933&RS=PN/5,928,933

Market Potential: The agricultural and pharmaceutical industry seeks production of compounds in high yield with good optical purity. The products of the present invention are useful as precursors for chemicals of high value in these industries. Specifically, cis-4-hydroxy-D-proline (CHDP) and trans-4-hydroxy-L-proline (THLP) are useful for the preparation of agrochemicals and pharmaceuticals. Relative to previously known chemical methods, the claimed invention generates little waste and permits a facile approach to product recovery.

Benefits:

- Good optical purity.
- Generates little waste.
- Permits a facile approach to product recovery.

Applications:

- Preparation of agrochemicals and pharmaceuticals.

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